

intercom

Journal of the Air Force C4ISR community ★ July 2007

SPECIAL OPS COMM



INNOVATIVE AIRMEN ★ THE AFSOC MINDSET

★ TACTICAL COMM ★ EXERCISE FOAL EAGLE ★

TOTAL FORCE TEAM ★ FIGHTING TERRORISM



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Paul Stelmach, AFCA



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MAGAZINE AWARDS

2006
Best Internal Magazine
Blue Pencil Award * National
Association of Government
Communicators

2005
Best Magazine
DoD's Thomas Jefferson
Awards program & Air Force
Media Contest
Best Internal Magazine
Clarion Award * Women in
Communications

2003/2004
Most Improved Magazine
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Communications
Award of Excellence
- Internal Magazine
NAGC Blue Pencil
Competition
Best Online Newspaper
Air Force Media Contest
Best Designed Publication
DoD's Military Graphic Artist
Competition

LETTERS TO THE EDITOR

Readers say goodbye to 'intercom'

I have to echo Col. (Robert) Steele's (former AFCA commander) comments about how amazing your efforts were in conveying our stories. You and your team certainly made a difference in helping us learn about each other and about the tremendous contributions communicators make to the Global War on Terror.

You were no doubt a big part of why AFCA as a whole is, and continues to be, successful.

— Maj. Melchizedek "Kato" T. Martinez / A6AO HQ Air Force Special Operations Command

Sorry to hear that the *intercom* will be closing in August 2007. I have been reading this magazine since its inception. Thanks for the outstanding work and dedication that you and your team put into this magazine.

— Master Sgt. Sonny Shoyeb
Superintendent, JCS Vienna, Austria

I read with deep regret concerning the upcoming last issue of the *intercom*. What a tragedy for all of us who have enjoyed this superb newspaper and magazine over the years. I can fondly recall many times we troops, especially when stationed overseas, anxiously awaited the latest issue of the *intercom* — it was like a letter from home. As the last senior enlisted advisor for AFCC, [I see] this is just another in a long list of the many "lasts" we in the communications arena have sadly experienced over the years. Many thanks to all the wonderful people who have been a part of the Air Force's premier periodical (the *intercom*) for all these years. You have indeed served us well.

— retired Chief Master Sgt.
Ron Allison

As a member of AACS from 1948 to 1961, and AFCS until 1975, I will miss reading the one publication that has been the "glue" that has held the comm and info and the ATC communities together. The *intercom* is a

world class publication, and I hope that a follow-on command will understand what it has meant to all of us. I also speak for the more than 2,500 members of the AACS Alumni Association who will also miss it each month.

— retired Chief Master Sgt.
Richard P. "Hank" Sauer / AACS
Alum. Assoc. Newsletter Editor/Publisher

Wow, I just got hooked on your publication and you're leaving! As someone who has dabbled in graphics and desktop publishing for almost 20 years, may I say that the *intercom* is in a class by itself.

I have saved back issues as inspiration. It is truly amazing work. I know such skilled and creative folks will be at the top of their field, wherever they go! God speed!

— Master Sgt. James L. Pepper
MILSTAR Times Editor

Greetings! I am a retired chief master sergeant (3CXXX) with an online subscription to *intercom*. I saw your notice that August will be the final edition. I have enjoyed reading this publication over the years, and it will surely be missed. It is indeed a first class publication and I sincerely thank you and the others responsible for the great job! You are a talented group of professionals. Hopefully, your professional future remains bright and best wishes!

— Mark T. Kopca
Aleut - A Family of Alaskan Native
American-owned SDBs

Thank you for your support and words of encouragement. It is indeed a great, personal loss to me as I have come to love the comm and info community. It's been a tremendously rewarding experience to showcase our great Airmen in this format. I've always said that print brings something special and useful to the fight, but we will work hard to create another venue where we can collaborate ... and keep up with all these acronyms! — Karen

JAG IN A BOX

Continue the column?

Now that the print version of your column is ending, will you continue this helpful feature?

Yes, this marks the final *intercom* installment of the Jag in a Box. We've had the opportunity to talk about law and technology for four years and during that time many of you have called or written us after each issue hit the streets. And, to keep bringing you cutting edge IT legal information, we're going to continue answering your questions in an e-mail forum. Every four to six weeks, we'll produce another article and send it out to those who ask to receive it. How can you get on the list? Simply write "JAG in a Box" in the subject line and send an e-mail to afca.ja@scott.af.mil. It doesn't get any easier than that! You can even access old columns at our Web site, <https://private.afca.af.mil/ja>, and they will continue to be housed on the public site as well.

To all of our readers, thank you for supporting our office. The comments and questions generated by this article each month are a testament to your realization that the law is a big player in the field of information technology. Our goal was to raise awareness that the law does have an impact in all we do in this area. We know that we met that goal and then some.

Jag in a Box will continue via an e-mail listserve. To sign up, just send an e-mail to:
afca.ja@scott.af.mil

For questions, you can always call DSN: 779-6060



Fritz Mihelcic
AFCA Deputy
Chief Counsel

INNOVATIVE AIRMEN



Great ideas fuel transformation in AFSOC

HURLBURT FIELD, Fla. — As we commemorate the Air Force's 60th Anniversary, it's truly amazing to look back at our capability as an Air Force 60 years ago compared to today — and especially to where we're heading.

The best part of our Air Force heritage has been our success over the years in attracting bright men and women to serve. Our vast capability is a result of the steady technological climb we've made every time we implemented someone's great idea — and many of the best ideas didn't come from highly paid engineers at big corporations, but rather from the ingenuity of our Airmen. Every step of the way, communications warriors have been there to turn great ideas into reality.

Since I've been the commander of Air Force Special Operations Command, I've witnessed an incredible transformation. What makes it more remarkable is how quickly we've advanced while maintaining an ops tempo that's never been higher.



Lt. Gen. Michael W. Wooley
Commander, Air Force Special Operations Command

It's taken a lot of teamwork to get us where we are now, and to ensure we become even more effective and lethal in the future. None of this effort would be possible without the contributions and expertise of our communications and information professionals. Our A6 works closely with AFSOC personnel at every level and from every career field, harnessing information technology as a tool to revolutionize the way we fight wars of today and prepare for the wars of tomorrow.

In fact, much of AFSOC's increased capability has come from bottom-up solutions — smart Airmen close to the fight adopting better ways of doing business.

For example, with a little help from savvy communications folks, a clever aircrew figured out a way to stream video from Predator/MQ-1 unmanned drones into an AC-130 gunship, which provided aircrews better situational awareness and decreased the time spent in high threat areas. Our resource teams are now

working to outfit all our gunships with this capability, in addition to other technological enhancements.

AFSOC has also made great strides in C4ISR capability. The command activated the 3rd Special Operations Squadron to fly Predators, and the 11th Intelligence Squadron to process, exploit and disseminate that video from a special ops perspective with systems new to DOD.

Because a small number of proactive people succeeded in making big things happen, AFSOC can now get the special operator superior intelligence at a faster rate than ever before.

This process is highly dependent on vast communications resources, underscoring how ops can't eliminate our enemies without timely, accurate intelligence — and intelligence can't get to ops without a lot of heavy lifting from comm.

We've also seen significant advances in the air-ground interface capabilities of our special tactics/battlefield Airmen. Their ideas and requirements for tactical ISR have challenged industry to develop smaller unmanned aerial systems with the range to "see" the enemy behind the ridge, yet easily fit in a rucksack.

Through a new Cursor on Target capability — information and communications systems combined with better operator training — we've reduced the time it takes to call in airstrikes from 28 minutes to 3 minutes.

Other initiatives include efforts to lighten the load of special tactics personnel, as we work to develop smaller, lighter, more capable communications equipment while increasing interoperability and range.

Our AFSOC comm professionals are also being called on to support growing missions that include the CV-22, an aircraft that goes the speed of a cargo plane but can hover and vertically take-off and land like a helicopter.

They're supporting non-standard aviation aircraft to meet inter-theater airlift shortfalls; training foreign air forces in U.S. Air Force skills; and recapitalizing our tanker fleet to meet the growing demands for special operations forces tanker support.

In addition to these priorities, AFSOC's expansion to our western base at Cannon AFB, N.M., will require a communications beddown effort on a grand scale.

AFSOC's transformation is a credit to innovative Airmen, the greatest part of our Air Force heritage.

Because the challenges of our unconventional missions often call for unconventional approaches, we can't always pull ready-made solutions out of a box.

Keeping our cutting edge depends on people with good ideas and initiative to push us toward even brighter horizons.



► Comm troops in the field helped the command transform its video, intel and air-to-ground communications capabilities.

JARGON WATCH

► **Cursor on Target:** The ability to replace the human voice and physical interface needed when combat controllers in the field transmit targeting data. It will allow all the necessary information and tasking orders to flow to the target as needed when command center personnel literally put their computer cursor over the target and click to approve.

reduce call time



cursor on target



lighter, leaner equipment

ACHIEVE JOINT EFFECTS OPERATIONALIZE CAREER FIELDS SPOTLIGHT OUR PEOPLE



AF can learn from AFSOC mindset

HURLBURT FIELD, Fla. — Today's Air Force is going through a dramatic change that's not only affecting the size of the comm and info career field, but also altering how we must do business.

You've heard it before, and you'll continue to hear it: We must work to achieve greater effects and more efficiently with fewer resources. This is the mindset for today's military; however, the special operations forces have been performing this way since the inception of U.S. Special Operations Command in 1987.

USSOCOM was established because Congress felt the need to create a smaller, jointly trained force, capable of working within the full spectrum of warfare to achieve strategic effects.

Yet, despite its smaller footprint, the need for Air Force Special Operations Command is growing. This is evident with the SOF expansion at Cannon Air Force Base, N.M., the increase in Aviation Foreign Internal Defense capability, and our new organic means to conduct Intelligence, Surveillance and Reconnaissance.

As an Air Force facing the loss of manpower and resources, we can learn and benefit from the special operations construct.

The first lesson is to focus on understanding and working to achieve joint effects. Second, we must continue to operationalize our career fields. And, third, it's imperative that energy and resources be applied to people, not just systems.



Col. Michael Curtis

AFSOC Director of Communications and Information

LESSON NO. 1: ACHIEVE JOINT EFFECTS

If you've ever deployed to or worked for a combatant command, you understand the importance of joint operations. The need for jointness cannot be overstated and must be applied when procuring, developing, and implementing the information and communications systems that are so vital to our military.

By thinking jointly, we can leverage smart capabilities from other services and buy into them. Operating jointly in our career field will also give us greater credibility allowing better application of our smart practices to others.

AFSOC currently operates in a joint construct due to a component relationship to USSOCOM. Fortunately, we've had successes in the joint arena, such as implementing the SOF Deployable Node-Medium communications package, which is lightweight, carrying case-sized satellite hub and transmitters.

Even with our success, AFSOC has some way to go. The current strains of the military and the reductions within the Air Force no longer afford us the luxury to focus on Air Force-centric systems that cannot provide value in a broader sense.

LESSON NO. 2: OPERATIONALIZE OUR CAREER FIELDS

AFSOC has the capability to project an extensive range of combat forces. There are small special tactics teams providing terminal control of aircraft and covert reconnaissance. There are AC-130 gunships

that provide precision and persistent engagement of the enemy. The CV-22 Osprey, our newest aircraft, provides the latest wave of special operations mobility. There is also the Joint Special Operations Air Component, responsible for providing command and control of the air component to special operations forces.

We must understand how communications and information systems add value to each of these operations. There is much more to communications than the traditional "network."

Communicators have greater value than most people realize in supporting effective combat operations for each of these weapon systems. We must continue to strengthen our capability to effectively contribute to the mission by learning about our combat systems' employment and what role communications and information plays in it.

"Net-centric operations" is the current buzzword within the comm and info community, and truly plays a vital role in conducting combat operations now and in the future. Realistically, how much do operators know in employing the increasingly complex networks on the battlefield? Conversely, how much do communicators know about the operational requirements or how to better support them?

The answers most likely vary depending on which office or Airman you ask. **The Air Force needs operationally focused communicators across the board, not just pockets of this**

expertise. Comm and info personnel are more than capable of educating others on how to leverage communications and information systems in combat, but we can't do so without truly understanding what's important to the warfighter.

LESSON NO. 3: SPOTLIGHT PEOPLE

The third concept I want you to take away from the SOF mindset is the need to spotlight our people, not only our systems. There are many areas to apply this notion. As previously mentioned, we must do our best to train as Airmen for the joint fight.

We must look at our day-to-day business practices and management of information as more than the latest business technology. And, we must continue to grow our leaders for tomorrow.

My challenge to you is to take the lessons the Defense Department has already learned and applied to special operations and use them in your backyard.

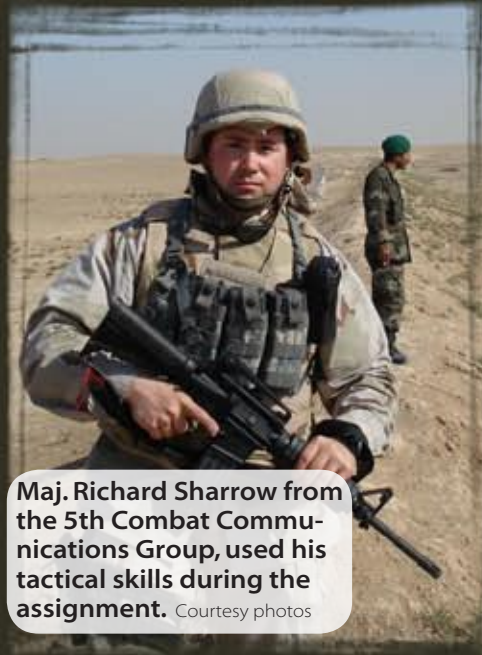
Jointness is a requirement, not just a buzzword. Operational knowledge is the core of our profession. Emphasis must be placed on human factors not just better technologies.

Remember the SOF truths: "Humans are more important than hardware, special operations cannot be mass produced, quality is better than quantity, and competent SOF cannot be created after emergencies occur."





Maj. (then Capt.) Jennifer Hlavaty brought her foreign diplomatic skills to the team.



Maj. Richard Sharrow from the 5th Combat Communications Group, used his tactical skills during the assignment. Courtesy photos

CENTAF Airpower Advisory Group



Comm officer Capt. Vic Norris brought lessons learned from serving in Iraq to the team, seen here in Gardez, Afghanistan.

Team modernizes comm support from forgotten Russian hardware to updated radio, data network

HURLBURT FIELD, Fla. — Locked and loaded— with an arsenal that would make Rambo proud — and eyes scanning the Kabul streets for IEDs and suicide bombers, a team of American military advisors convoy to meet with their Afghan counterparts.

They were there as part of a team that was mobilized to help develop a plan to assist the Afghan National Army Air Corps during the fall of 2006.

It was then that Brig. Gen. Frank J. Padilla, mobilization assistant to the commander of Air Force Special Operations Command, assembled this team of fixed and rotary wing operators, maintainers, Aviation Foreign Internal Defense advisors, and mission support subject matter experts to support a request from U.S. Central Air Forces commander.

This team became known as the CENTAF Airpower Advisory Group.

They were tasked to work with the Coalition Security Transition Command-Afghanistan, International Security Assistance Force, and the Afghan Ministry of Defense to assess Afghanistan's air power requirements and capabilities, and to develop a plan to assist the Afghan National Army Air Corps.

General Padilla selected Airmen from across the Air Force, focusing on individuals with tactical backgrounds and international mentoring experience.

He selected three communicators from AFSOC: Capt. Vic Norris, formerly of the Multi-National Security Transition Command-Iraq, then-Capt. (now Maj.) Jennifer Hlavaty, an Air Force Intern Program Graduate and OSD action officer for the 2005 Defense Bilateral Working Group with the Colombian government, and Maj. Richard Sherrow, is an AFSOC/A6 assest who spent considerable time with the 5th Combat Communications Group and is currently in Iraq.

"This was an opportunity to truly make an impact on a global scale," said Maj. Hlavaty. "To take lessons learned in Iraq to help the Afghans secure their future was very rewarding. We focused on getting the lay of the land from our counterparts in CSTC-A, and although they had been primarily focused on the Afghan National Army, the byproduct of their work was going to provide valuable capabilities to the ANAAC."

The team quickly discovered a Vietnam-era Russian comm architecture consisting of old analog high frequency radios, an extremely limited data capability and 50-year-old Russian aircraft. The CSTC-A had begun to supplement the army's communications with commercially leased satellite access and more modern radio sets.

But, as Maj. Sherrow explained, "it was important that the Afghans leverage their own commercial comm infrastructure in developing their military communications capabilities. Once we understood the big picture, we were able to connect with the Afghans to determine where they wanted to go with air power. Their vision was crucial to making sure our inputs were viable and sensible."

The CENTAF team continued to do periodic vector checks with coalition and Afghan leadership ensuring that the ideas they were working were feasible. They traveled across the country, surveying sites for future bases and missions.

They were asked to focus on casualty evacuation, presidential airlift, possible Intelligence Surveillance and Reconnaissance platforms to assist with the hunt for Al Qaeda and the Taliban, modernize the Russian airframes for transport and light attack, and establish a more modern and capable command and control radio and data network.

Capt. Norris said, "We were able to take a concept such as ISR and develop a plan that would work with the communications capabilities that were in place and that the Afghans understood. We had to be realistic with the commercial infrastructure, for example. It could not support high bandwidth applications such as streaming video, so we had to be very creative with our recommendations."

Ultimately they generated a plan to provide the support that would enable the Afghans to provide air power resources to their most critical requirements. Although this assessment took only 45 days, the team had a lasting impact on Afghanistan's future, said Afghan officials. Abdul Rahim Wardak, Afghanistan's Minister of Defense, said, "The (Afghan) Air Corps will change the history of Afghanistan" and the CENTAF advisory team helped to "make it happen." — *compiled report*



► Communicators in the Global War on Terror are being tasked with increasingly diverse missions such as helping to improve Afghan air power command and control.

JARGON WATCH

- IED: Improvised Explosive Device
- CSTC-A: Coalition Security Transition Command-Afghanistan
- ISAF: International Security Assistance Force
- AMOD: Afghan Ministry of Defense
- ANAAC: Afghan National Army Air Corps
- ANA: Afghan National Army
- MNC-I: Multi-National Corps-Iraq

Readiness + Innovation = MISSION SUCCESS

TACTICAL COMM

By Maj. Yash Gustafson

1st Special Operations Communications Squadron
Tactical Flight commander

HURLBURT FIELD, Fla. — Historically, the Air Force has sometimes required tactical comm units to deploy with less than three hours notice, so everything must be ready — administratively, physically and mentally.

But readiness isn't everything. We must also be innovative, or we'll lose that readiness very fast. We are constantly being asked to become lighter and more capable, and unless we continue to fine tune our operations, the mission could fail.

INNOVATE OR FAIL

One example of how a mission almost failed if we hadn't been innovative was when we received a tasking on a Friday morning to deploy to an austere environment the next day with the following requirements and limitations: one pallet, three comm troops, classified and unclassified network capability, and secure voice to support a special operations air command and control detachment of 60 people.

Oddly enough, in my almost two years at Hurlburt Field, I had never seen a requirement to support so much with so little. Fortunately, we had just acquired the technology and training we needed just two months prior that would make this mission successful.

Without this new tactical package, we would not have been able to support the contingency, and our credibility to support no-fail missions would have been questioned.

DEPLOYABLE NETWORK-MEDIUM

This technology is known as the SOF Deployable Network-Medium package. It includes a Hawkeye Lite antenna integrated into classified and unclassified network capability, secure and nonsecure Voice over Internet Protocol capability, and desktop video teleconferencing capability.

During training a few months prior to the no-notice tasking, we built the SDN-Medium pallet, along with two small generators, tables, chairs, and a tent. Once deployed, the team performed flawlessly and the package was soon operational.

The SDN-Medium team was met by a radio maintainer already deployed at the contingency site. He was a one-man air operations center with one Manpack radio and two Inmarsat packages until the aircraft and SDN-Medium team arrived.

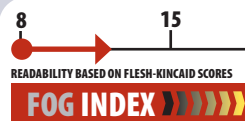
Our radio maintainer arrived from his other deployed location to meet us. The small Inmarsat package he used couldn't support the incoming aircraft and people, but he was able to stage initial comms. Once the SDN-Medium arrived and became operational, the Inmarsat became the back-up.

INITIAL COMMUNICATIONS ELEMENT

The SDN-Medium became a great example of innovation that ensured mission success. However, there are other projects

we're advocating to help us keep pace with mission requirements for lighter and more robust comms.

We currently have an Air Force system called the Initial Communications Element that sprang out of Operation Enduring Freedom. ICE provides classified and unclassified networks, DSN and e-mail capability, and



People can be ready, but if we don't fight for the right technology and training, we can lose the fight.

JARGON WATCH

SDN-Medium: SOF Deployable Network-Medium

INMARSAT: Satellites that provide commercial comm services to a range of governments, aid agencies, media outlets and businesses that need to communicate in remote areas.

ICE: Initial Communications Element

VoIP: Voice over Internet Protocol

uses the USC-60 satellite dish. ICE was our smallest network package — only four pallets worth of equipment — until the SDN-Medium arrived. However, ICE is still required for several scenarios. SDN-Medium is preferred by our operational leaders, so our challenge was how do we get the ICE package smaller and more like the SDN-Medium? The answer is with everything over IP.

We started testing secure VoIP phones with the ICE eliminating the phone module if needed. We also tested the remote client software which would connect back to home base eliminating the need for lots of servers.

WAVE - TACTICAL RADIO OVER IP

Another innovation for information fusion is the WAVE product. WAVE provides tactical radio over IP. This is much like the Radio over IP network, or RIPRNET, concept.

The only difference is WAVE needs additional software, a particular router, and a web server to house its software.

This allows operational centers to watch predator feeds; listen to aircraft communications, watch a common operating picture, and speak with mission personnel. This meshing of information provides timely information to make timely decisions and ensure mission success.

WIRELESS NETWORKING

As we look further into innovation, the next step is wireless networking. This enables quicker set-up and less frustration dealing with changes to the set-up configuration.

Now, you can just move your laptop without having to move cables. People who still require larger bandwidth than wireless can provide can get hard-wired.

CROSS TRAINING

The final innovation we are moving forward on is cross-training our career fields. Radio operators and radio maintainers must be able to do each other's job as well as some network functions.

Our phone and satellite communications experts are learning networking and servers and our network and server personnel are cross-training each other.

While we still keep people doing their core skill code work as much as possible, the only way we will survive with the upcoming personnel cuts is to cross train.

This readiness training is our main measure of success in-garrison while our innovations allow us to go to the fight . . . and win.

Team members set up Theater Deployable Communications during a month-long exercise held in Korea. The annual exercise demonstrates resolve in supporting the Republic of Korea against external aggression.

courtesy photos

Comm warriors bring support to Korean forces

EXERCISE FOAL EAGLE



By Tech. Sgt. Steven Gamble
353rd Operations Support Squadron

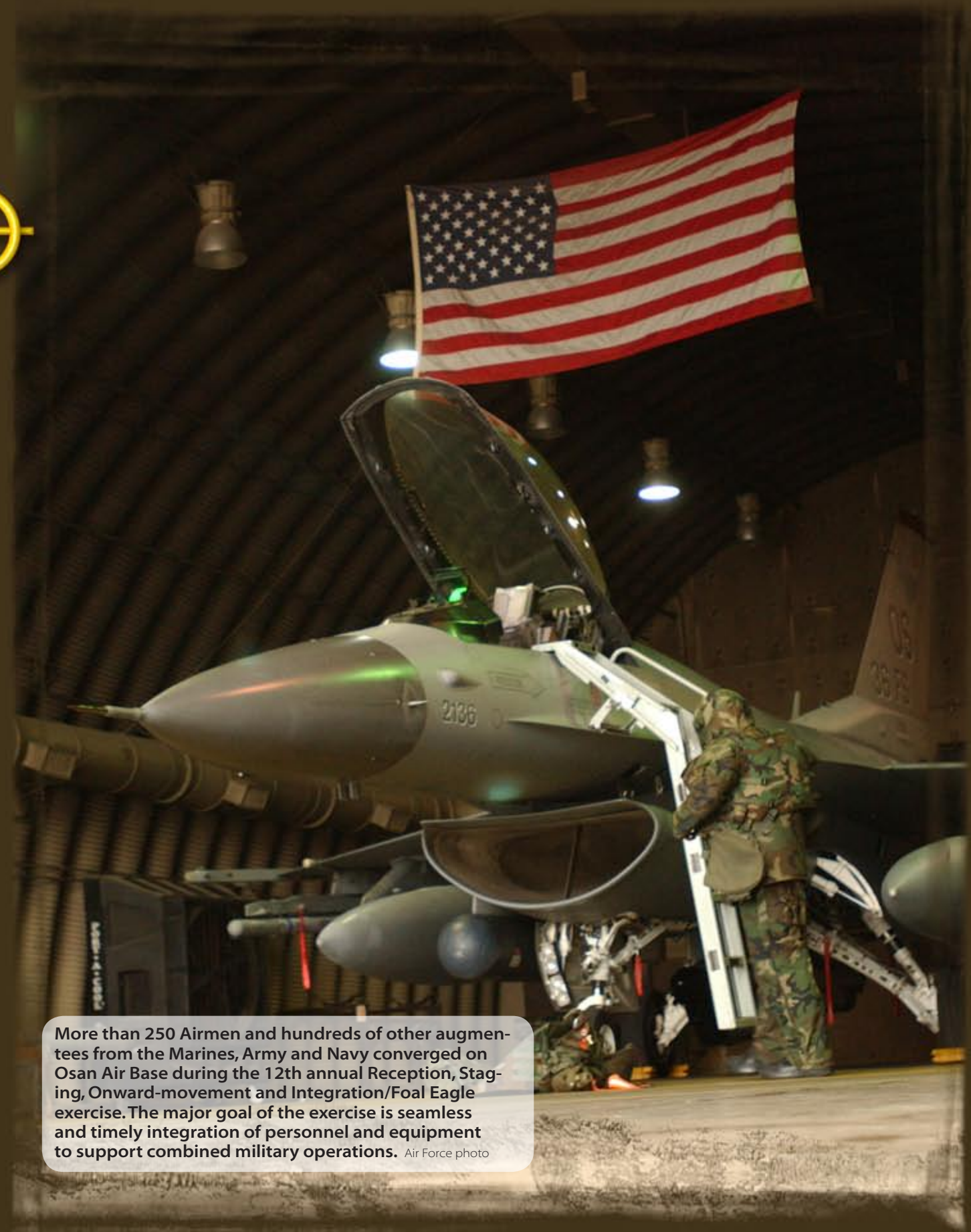
KADENA AIR BASE, JAPAN — In March, Airmen from the 353rd Special Operations Group here deployed to Taegu Air Base, Republic of Korea for exercise Foal Eagle. As part of that group, 15 members from the 353rd Operations Support Squadron's communications flight deployed with its Theater Deployable Communications section.

During this month-long exercise, the TDC team set up and maintained more than \$3 million worth of assets, which provided secure and nonsecure internet and telephone communications systems supporting U.S. Special Operations and Republic of Korea forces.

"Our mission is to provide a reliable communications package to our coalition forces," said Staff Sergeant Hamide Birbiri, a transmissions/voice technician in the communications flight. "We provide the gateway for all tactical communications for our deployed SOG commandos." Part of their job involved relocating the command post with the TDC's wireless radio network extension shot.

Lt. Col. Michael Wormley, the mission commander, said, "The shot worked as advertised providing near seamless transition of command. I continue to be impressed with the depth and breadth of services that [this team/technology] provides. It's the heart of our command and control."

Team members from the voice element also implemented a "crash net" voice system, a direct telephone hotline that links high priority buildings with time-critical information that's passed rapidly throughout the compound. The team also provided satellite communications and continuously monitored the strength of the signal to ensure the best possible communications link for users. The team also set up a Tactical Local Area Network. This network provided a secure environment in which information could be shared between the participants. TACLAN also provided a link for instantaneous information exchange between aircraft and command and control components. This communications link was critical when dealing with coalition aircraft missions between nations. The team built a Web page that provided information to the Combined Joint Special Operations Air Component personnel supporting the exercise. It automatically updated execution checklists, which reduced the manpower required to keep the information current. While deployed, TACLAN administrators also created over 150 accounts for exercise participants. — *Staff Sgt. Catherine Colly and Airman 1st Class Chris Rodgers contributed to this story.*



More than 250 Airmen and hundreds of other augmentees from the Marines, Army and Navy converged on Osan Air Base during the 12th annual Reception, Staging, Onward-movement and Integration/Foal Eagle exercise. The major goal of the exercise is seamless and timely integration of personnel and equipment to support combined military operations. Air Force photo



ICE above the Arctic Circle



By Maj. Monti L. Knode

352nd Operations Support Squadron
communications flight commander

RAF MILDENHALL, England — “So you’re telling me we’re going to lose all our satellite connectivity, my NIPR and SIPR and phones, and my tactical C2, for an hour and a half . . . every day?”

“Yes, sir,” I answered. “We still have line-of-sight, but in these mountains it’s a crap shoot. And, we have our land lines provided by the Norwegians for wireless Internet and phones.”

A rare smile cracked from above as he shook his head. “You ever seen this before, Del?”

“No, sir. This is why we come to places like this.”

“And this little phenomenon is called . . . ?”

“Sun contention, Sir.”

Welcome to Special Ops and to Evenes, Norway, in February. The Air Station is located just north of the Arctic Circle, a couple of hundred miles from the northern border with Russia.

Now a civilian airport, the military infrastructure is vacated most of the year, but for a couple weeks the Royal Norwegian Air Force hosts Exercise Cold Response, bringing NATO and Partners for Peace special operations forces together to accomplish in weeks what would normally take several months of cold weather training.

What often happens on an exercise of this magnitude is the communications community functions to support the other exercise participants, rather than exercise its own operational readiness capability. The operations community lives and dies by Mission Essential Task Listings — core competencies deemed essential to a wartime mission.

Well, the A6 has METLs, too. So, comm took full advantage

of this rare opportunity to prove their mettle and accomplish some spectacular training and proof-of-concept ideas.

For starters, they only sent 10 people, pared and tailored down from what the requirements normally state. They proved they could set up and tear down in any climate; set up the command and control construct within minutes and had C4 operational the first day. The team fought through snow, ice, and extreme winds (twice with birds bathing in the satellite dishes), to trudge up knee-deep, snow-covered hills with antennas, anchors and cabling.

They showed the value of cross-training their troops as a 3C2 (tech controller) set up the auto-tracking on a satellite dish while a 2E1 (radio frequency troop) conducted flight-following with Pave Low helicopters and an AFETS (Air Force Engineering and Technical Services) troubleshooted the Blue Force Tracking software system—a testament to absolutely beautiful teamwork throughout the exercise.

They also provided secure wireless capability to the entire Joint Air Operations Center.

“The ability to use wireless access for our SIPRNET terminals saved a significant amount of time typically dedicated for set-up (and) provided the flexibility to accomplish the mission in a timely manner,” said Capt. Jason Barass, chief of the 352nd Operations Support Squadron Intelligence flight.

So while combat controllers jumped into freezing water, MC-130P Combat Shadows refueled MH-53 Pave Low helicopters in low-light conditions, MC-130H Combat Talon IIs conducted low-level drops around craggy snow-capped peaks with all the coalition partners, it was the comm team who tied it together for them and showed what can be done to make the mission successful.



Airborne Networking Integration

By Capt. Eric Carrano

C4 Operations branch chief

HURLBURT FIELD, Fla. — Net-centric warfare is not just about routers, switches and computers. Rather, it’s an emerging theory of warfare and involves a culture change affecting large communities of interest groups across the Global Information Grid throughout three platforms: terrestrial, air and space.

Airborne networking is the DOD’s “GIG in the sky” and will enable joint and coalition net-centric air operations.

The purpose of the Air Force’s Airborne Networking Integration effort is to align and synchronize existing and future airborne networking efforts with mission priorities to deliver enhanced combat capability while transforming to net-centric warfare.

Along with Combat Air Forces and Mobility Air Forces,

AFSOC is working to identify special operations airborne networking requirements.

The goal is to ensure we move toward becoming fully interoperable with both SOF and conventional weapons platforms.

We’ve developed an initial roadmap that gives a high-level view of our current interoperability capabilities and gaps needed to move toward net-centric operations.

For example, the Precision Engagement mission area includes the ability to provide precise, rapid and sustainable firepower and suppression capability to support SOF or conventional forces. The platforms within AFSOC associated with Precision Engagement are the AC-130H/U, MQ-1, MQ-9, and combat controllers.

We’re working to upgrade a large majority of our information exchanges

which are still voice-based, and we’re continuing to implement the Cursor-on-Target’s schema to pass along targeting data.

Our AC-130 gunships are installing a commercially based LAN that incorporated commercial data and Link 16 data capability which will give us a common tactical picture of ground targets.

This will help to reduce fratricide and shorten the time needed to identify and coordinate targets when compared to voice exchanges. So, even though funding is limited, the Air Force can reap big results by using ANI’s mission-based capability assessments.



► Airborne networking teams fill in the interoperability gaps to move toward net-centricity.

JARGON WATCH

- ANI: Airborne Networking Integration
- CAF: Combat Air Forces
- MAF: Mobility Air Forces



A CV-22 Osprey from the 58th Training Squadron at Kirtland Air Force Base, N.M.
Staff Sgt. Matthew Hannen / Torch Magazine



Airman 1st Class Tim Neville / AFPN

A paratrooper from the 320th Special Tactics Squadron, Kadena Air Base, Japan, floats toward the earth after a HALO jump at 10,000 ft from an HC-130 aircraft during a training exercise.



Master Sgt. Bill Thompson / AFNS

A member of the 720th Special Tactics Group speeds down a road during training.



Senior Airman Andy M. Kin / 1st SOW

A Navy SEAL tries to steer clear of surrounding parachutes while conducting maritime training in the Gulf of Mexico, while combat controllers (below) prepare for action.



Tech. Sgt. Jeremy T. Lock / 1st CTCs



Senior Airman Ali E. Flisek / 1st SOW

An M-17 helicopter lands near members of the 6th Special Operations Squadron during training.

EYE
ON
COMMAND

DISRUPTIVE TECHNOLOGIES

Comm troops seek immediate solutions

By Capt. Vic Norris
Deployable communications
program manager

HURLBURT FIELD, Fla. — Terrorist organizations have an ability to rapidly procure and field technology without having to jump through research and development issues and bureaucratic hurdles.

This causes what's known as disruptive technologies, which are technologies that force a paradigm shift in business practices.

This shift is forcing our military to find or develop our own disruptive technologies to keep pace. During the past 60 years, the Air Force focused on requirements levied to respond to the current threats.

The Department of Defense has, in the past, pushed the research and development envelope with the commercial sector who built items such as MILSTAR, Secure Iridiums, and even INMARSAT.

But now, changing terrorist tactics and the Internet explosion of the '90s, combined with an über-competitive information technology market, have forced a paradigm shift in technology acquisition.

Instead of gathering requirements and seeking solutions, communicators around DOD are now scanning

the commercial sector for new software, hardware, systems and overall capabilities that may be the next disruptive technology.

Air Force Special Operations Command continues to push its communicators to develop an understanding of the mission they support and find new and potentially disruptive technologies that will better support Special Operations Forces.

This mindset has enabled AFSOC to continue to pace the Air Force in developing lighter, leaner and more capable communications systems.

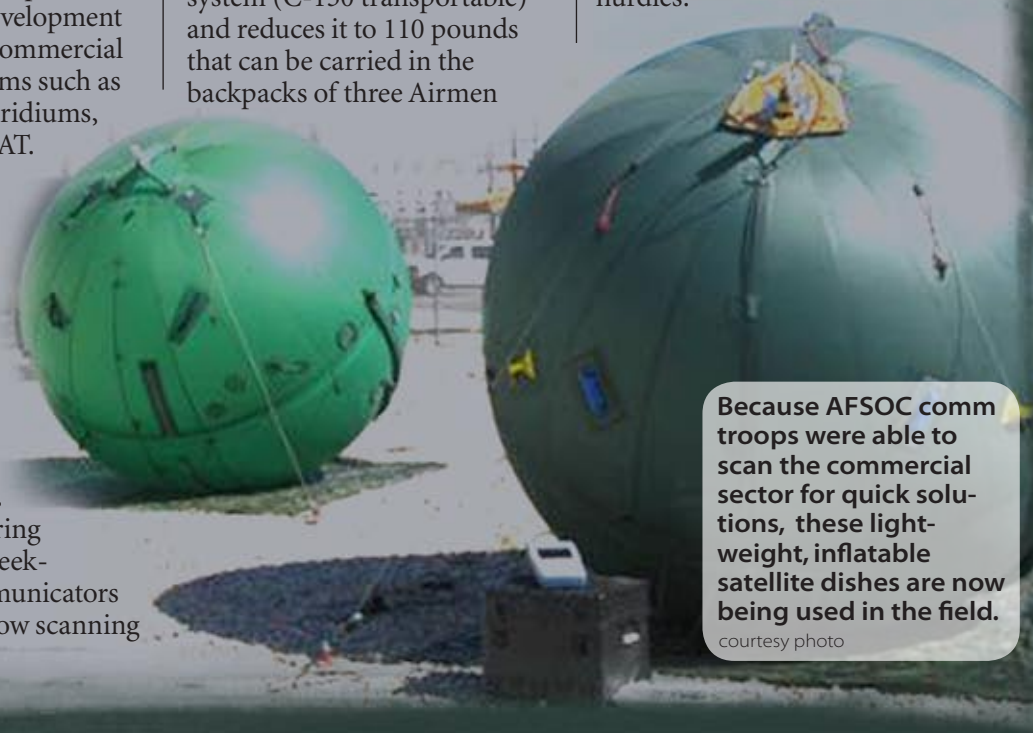
It has also led to the development of, among other things, the SOF High-Speed Agile Reach-Back Kit, known as SHARK, as well as finding such obscure capabilities as an inflatable 5 meter dish that takes a 4,200-pound system (C-130 transportable) and reduces it to 110 pounds that can be carried in the backpacks of three Airmen

and parachuted from an aircraft. It soon becomes apparent that disruptive technologies are the direct result of a complete mission understanding and a continual search for technologies that may enhance a mission now or in the future regardless of any currently levied requirements.

Unfortunately, bureaucratic hurdles are in place that frown on this revolutionary brand of procurement. These hurdles are designed to ensure material is not procured for the sake of procurement and that critical resources aren't wasted. But, if communicators are indeed in-step with the users they support, they'll be able to find new technology, explain it, demonstrate its usefulness, and help draft the requirement in a proactive manner that will push through the necessary hurdles.

Because AFSOC comm troops were able to scan the commercial sector for quick solutions, these lightweight, inflatable satellite dishes are now being used in the field.

courtesy photo



352nd OSS: What do you think of the career field mergers?



Tech. Sgt. Angela Sarver

"I think all it does is justify 'do more with less.' [Right now we're highly skilled in specific areas.] Becoming a 'generalist' force may make it easier to do more with less.

But, by having 'less' trained people on the Air Force's highly complex systems will set [us] back 10 years."



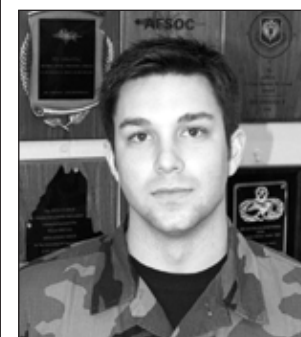
Staff Sgt. Decarla White

"I believe the career field merger will weed out those who don't give the Air Force 100 percent. It will keep the best of the best, and allow the Air Force to maximize its potential."



Senior Airman Kyle Bookhardt

"Mediocrity is cost effective... If the Air Force's idea to save money is to reduce its expertly skilled technicians to broad knowledge operators, it will accomplish its mission, but we may find it much more difficult to keep the same level of quality output the Air Force has known so far.



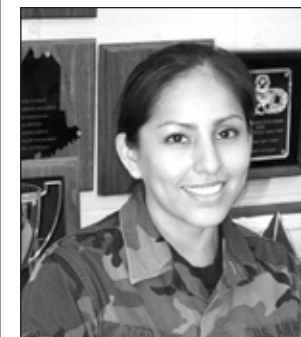
Senior Airman Mark LeCouter

"The career field merge is necessary as far as technology advances are concerned. I don't agree with the fact that so many people are going to have to retrain or separate. However, it will give the people a chance to diversify their knowledge of all communications career fields."



Staff Sgt. Antonie Jackson

"I believe it puts too much training on comm career fields that already have numerous aspects to learn. I also believe this will take away the ability to master our jobs, which will in turn make our service less effective. This seems very dangerous with the problems we may soon face."



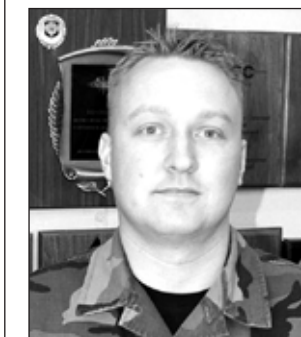
Staff Sgt. Roxana Reed

"It will hurt manning and training, and many other areas; however, the final product will be ideal. As for my career field, I think this will give us a lot of new experiences and opportunities. It's definitely going to be a painful transition, that is for sure."



Staff Sgt. Kelly Hollier

"It's a mistake to merge this many career fields. We've always been highly skilled technicians. This is the nature of the job we are in; things like attention to detail and knowing a system completely are invaluable capabilities. The merge will degrade the quality of services we provide to the warfighter and make the GWOT harder to fight."



Staff Sgt. Matthew Kelly

"This career field merge will be a new and exciting challenge that I look forward to. This merge opens up a lot more doors for individuals in my career field to go to new bases, as well as learn new trades that will better ourselves in and out of the Air Force."

280th COMBAT COMMUNICATIONS SQUADRON



Members from the Alabama National Guard deployed to Afghanistan to replace a Theater Deployable Communications package, and later to transition the base to a permanent solution. courtesy photos



TOTAL FORCE TEAM

By Master Sgt. Randy O. Green
Alabama Air National Guard

SOUTHWEST ASIA — Thirteen members of the Alabama Air National Guard's 280th Combat Communications Squadron recently got a chance to experience AFSOC's version of the Air Force's Total Force Integration initiative.

The opportunity came as they deployed to Afghanistan in support of a Joint Task Force operation as part of Operation Enduring Freedom.

The initial team of eight had their work cut out for them. An AFSOC Theater Deployable Communications-Integrated Communications Access Package, with equipment and Airmen to support it, had been deployed to the base three years earlier. While AFSOC had established a rotational cycle for the people, they had not been able to do so for the

TDC/ICAP equipment because of other operational taskings.

The austere Afghanistan environment had begun to take a toll on a portion of the ICAP suite. It was just a matter of time before a hard failure of the gear occurred.

Enter the 280th CBCS, AFSOC's only Air National Guard Combat Communications Squadron and owner of 44 percent of AFSOC's deployable communications equipment. While some of the unit's equipment packages had deployed in support of Operation Iraqi Freedom, the packages had been back at home station for a while and were in pristine condition. It only made sense to replace the active duty equipment package with one from the Guard.

At that point, Maj. Eric Good, the squadron commander, asked if they wanted their troops to go set it up.

"That way our people will get to

use the training that they've worked so hard to accomplish, and [active duty] personnel will get a break from the constant rotations they've been doing since 2002," he said.

The proposal was carefully considered by HQ AFSOC, as they had never replaced a complete active duty communications package with one from the Air National Guard. In the end, they decided that the proposal was worth a shot, considering the 280th's past record of excellence.

Once on site at the undisclosed location in Afghanistan, 280th CBCS Airmen worked diligently to swap out the active duty communications package with the Guard communications package within the 24-hour authorized service interruption allotted for the operation.

After the successful swap, the team then settled down for day-to-day operations. It didn't take long for a routine to

become established, but they soon realized that even the simplest job request could turn into a nightmare. "Nothing's easy in Afghanistan," became a common refrain heard among the team members.

The base had a large number of communication organizations, each providing their own unique type of services to their customers, team members said.

It's not unusual for the same warfighter to have several different units furnishing him or her essential services.

The team made it a policy that if someone they were supporting had a comm problem, the 280th would take care of resolving that issue, no matter who provided the original service.

Another obstacle the team faced was the weather. While Alabama temperatures in January are mild, the temperatures in Afghanistan

were anything but mild.

"We knew it was supposed to be cold here, but we had no idea how cold 10 degrees below zero would feel," said Master Sgt. David Chase.

Team members also dealt with snow and ice, two other things that are not common in south Alabama. The slick conditions posed a threat to the team, which had to move equipment from the main communications hub to two outlying data nodes. But, it was moved safely.

After five of the initial eight Airmen rotated out and were replaced by more volunteers from home station, the team members faced another difficult task.

AFSOC had been seeking the right set of circumstances to pull the package back out of theater for some time, and they finally saw an opportunity. They charged the 280th with migrating services off of

the TDC-ICAP package.

"The transition to a permanent base infrastructure solution involved working closely with Army, civilian, and other special operations forces, using components and expertise from each to make the plan into reality," said Chief Master Sgt. Ronald Smith, the second rotation team leader.

"We were also able to call upon an Air National Guard Engineering and Installation unit from New York for assistance while installing fiber optics during the transition. Kudos to everyone involved."

Team members said the most rewarding thing for them was to use their training for this deployment.

"I'm proud to have been employed in the war effort in this manner, and will gladly volunteer to deploy with members of the 280th anytime and anywhere," he added.

FIGHTING TERRORISM IN THE PHILIPPINES

353rd OSS supports joint mission

By Staff Sgt. Christopher Ward
353rd Operations Support Squadron

KADENA AIR BASE, Japan — The Southern Philippines are a known breeding ground for terrorists, and that's why the U.S. Joint Special Operation Task Force has a presence there.

They advise and educate the Philippine military in overcoming this tough enemy.

"Deny sanctuary, deny movement, deny resources, and separate the population from the insurgents — straight from the counter-insurgency handbook," is how Col. David Maxwell, commander of the joint U.S. military mission in the region, explains the JSOTF's mission.

To do this, it takes an enormous amount of command and control throughout the Philippines, and members of the 353rd Operations Support Squadron play a key role.

Navy ships at sea, Army and Marine troops on the ground, and Air Force aircraft overhead — each one with its own component's communications equipment — creates a communicators challenge. But, each service has the same goal of talking to each other.

This is where the JSOTF J6 communications team comes in. This team consists of communicators from

each branch of service who work to provide command and control.

The 353rd OSS rotates its communicators in and out of this region every 90 days, and has been doing so since January 2005.

The team consists of radio operators, radio maintainers, and a Global Broadcasting System technician.

Radio operators pass important secure radio command and control traffic to and from commanders and their troops. They operate primarily from the JSOTF command section in Zamboanga, although they're sometimes located directly in the field or on ships for up to weeks at a time.

Radio maintainers usually operate out of the command section, but often travel to field and post locations to set up or work on broken equipment.

The GBS technician's sole responsibility is to ensure the maintenance and operations of the GBS terminal. The system supports large transfers of downloadable imagery to the JSOTF intelligence section and keeps commanders up to date with current news through the GBS' live streaming video.

Winning a war is directly related to the ability to provide timely, accurate, and actionable communication at all times, and members of the 353rd continue to support the Global War on Terror in this region.



No comm, no bomb ... but no power, no comm period.

By Senior Airman Jacob Terry
353rd Operations Support Squadron

KADENA AIR BASE, Japan — I'm an Electrical Power Production Airman assigned to the 353rd Operations Support Squadron's communications flight. My main mission is supporting two tactical deployable communications packages, the Initial Communications Element package and the Integrated Communications Access Package. I've had the experience of supporting these two packages in locations around the Pacific including Australia, Korea and Malaysia.

These deployment experiences were quite rewarding because I had the opportunity to experience different cultures and interact with local nationals all while supporting our Air Force mission of providing superior air power and agile combat support in the Pacific theater.

To ensure operational readiness, our section maintains an array of generators. Among these are a 2kw generator that supports our radio element for their multiple typhoon evacuations missions. We have 60kw MEP806B generators we maintain to support large scale exercises.

We also have six environmental control units that can be deployed to alleviate uncomfortable environmental stresses and keep equipment within required operating temperatures. We also often support the Army with power requirements as well. I believe we are fulfilling our Air Force mission to be ready at a moment's notice.



Members from the 353rd Operations Support Squadron routinely deploy to support communications requirements for the U.S. Joint Special Operation Task Force. courtesy photos

Philippine and U.S. military members work together to fight terrorist groups in the southern region. Navy photo by Mass Communication Specialist 1st Class Troy Latham

Air Resupply and Communications Service serves as prelude to AFSOC mission support

By Maj. David Farmer

Deployable, C2 systems branch chief

HURLBURT FIELD, Fla. — There are four truths people in Air Force Special Operations Command have realized and developed during its history. This history includes the air commandos in the China-Burma-India theater of operations, as well as Maj. Gen. William J. Donovan and his Office of Strategic Services agents in the WWII European theater.

These Special Operations Forces truths are:

- ▶ Humans are more important than hardware;
- ▶ Special Operations Forces cannot be mass produced;
- ▶ Quality is better than quantity; and
- ▶ Competent Special Operations Forces cannot be created after emergencies occur.

These SOF assets emphasize the need for an aviation force trained in irregular warfare to insert and resupply guerrilla forces behind enemy lines, as well as perform psychological operations.

Unfortunately, after World War II, the Army Air Corps didn't keep an entity responsible for developing the tactics, techniques and procedures for employing special operations aviation. In 1951, the newly formed Air Force was engaged in Korea. This war once again highlighted the need for special operations aviation.

On Jan. 5 of that year, the mission of organizing and

training Airmen for the air support of resupply and communications activities was assigned to Military Air Transport Service. By Feb. 23, the Air Force established Headquarters, Air Resupply and Communications Service and assigned it to MATS at Andrews Air Force Base, Md.

This new ARCS headquarters represented the beginnings of an organization dedicated to special operations aviation. The ARCS' responsibilities included developing a wartime capability of introducing, supplying and evacuating Ranger-type personnel behind enemy lines and of preparing, reproducing and disseminating psychological warfare materials.

Within the ARCS, communications squadrons were established to support three air resupply and communications wings.

Their missions included providing and maintaining a 24-hour-a-day broadcasting service on four frequencies simultaneously; providing unmodified jamming of enemy frequencies; augmenting base station communications functions with field stations using relay systems; and providing secure point-to-point and ground-to-air communications with aircraft and guerrilla-type personnel.

While the 583rd ARCW remained stateside, the 580th ARCW deployed to Wheelus Field, Libya, for operations within the European theater of operations, and the 581st ARCW deployed to Clark Air Base, Philippines for operations in French Indo-China and Korea.

Today, AFSOC performs the missions once performed by the ARCS in support of the Global War on Terrorism. Psychological operations are provided by EC-130H Compass Call and EC-130J Commando Solo aircraft that can cover the entire gambit of electronic transmissions. For the insertion and resupply of special operators behind enemy lines, AFSOC uses several different aircraft, including the MH-53 Pave Low and several variants of the MC-130. The command's newest aircraft, the tiltrotor CV-22 Osprey, will assume the insertion and resupply missions upon reaching Initial Operational Capability in 2009.

AFSOC active duty, Guard, and Reserve communications units provide broadcasting and relay/reachback to SOF as the ARCS did those years ago. The AFSOC Airmen performing these missions continue to use the SOF truths and the lessons learned from General Donovan and the ARCS to provide America's specialized airpower anytime, anywhere.

An R-4 rescue crew and (background) special operations troops serving in the China-Burma-India theater.

Special operations on Wheelus Airfield in Libya.

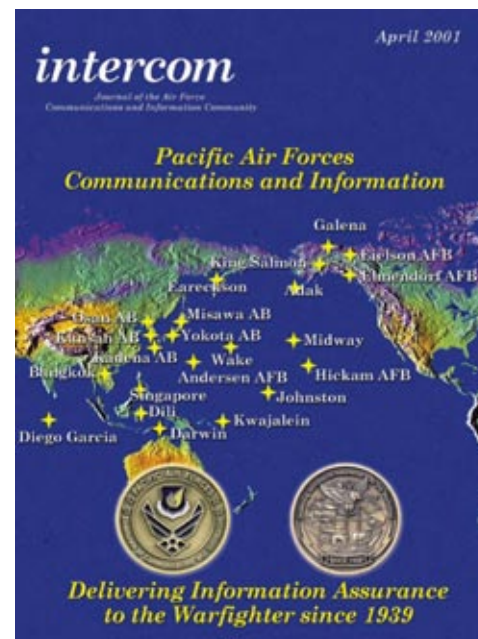




1961



1985



2001



2006

So long OLD FRIEND

By Lori Manske

Former AFCA Public Affairs chief and *intercom* editor

No more *intercom*? Say it isn't so! It's the end of the world as we know it. That last statement is more accurate than you'd think.

The Army Airways Communications System's "World" newspaper was serving communicators until 1961. When the "World" ended, the *intercom* was born to coincide with the establishment of Air Force Communications Service as a major command. My old friend has been around a long time.

I ended my 25-year bond with the *intercom* magazine in October 2006 when I retired from Air Force Communications Agency Public Affairs. The relationship was over, but that's not to say I don't still have feelings for it.

I was hooked on the *intercom* in 1981 when I arrived at Air Force Communications Command Public Affairs and served as assistant editor. My admiration was based on respect for the newspaper giant — a bi-weekly, tabloid-size major command newspaper, serving more than 55,000 communicators worldwide.

I became a member of the AFCC family and part of the network of AFCC's amazing unit public affairs representatives, the best in the world.

I'm not exaggerating. They not only wrote stories about their units for the *intercom*, but also for their base newspapers and local media.

Base PA officers often reported to AFCC headquarters that comm PA reps were the most enthusiastic and active.

Understandably so, there was so much comm news to share — unit accomplishments, personal achieve-

ments, best practices, new technologies, and more. Each edition was filled with great stories and high impact photos from combat communicators, engineering and installation professionals, maintenance crews, air traffic controllers, data automators, and more.

I became editor in 1983, excited about the opportunity to take the driver's seat in delivering news to the comm family. During the next seven years, the *intercom* placed first in the Air Force Media Contest six times. I'm not bragging; well, yes I am. But most of the credit went to the full- and part-time PA reps at the comm units.

The *intercom* thrived during the '70s and '80s, but by the '90s a dramatic change put *intercom*'s existence into question. AFCC was decentralized in 1991 and its units became part of the major command they supported. Feast for the once-mighty *intercom* turned to famine in the way of stories and photos as units turned their attention to their own major commands. But giants die hard.

Lt. Gen. Carl O'Berry, deputy chief of staff for command, control, communications, and computers, Air Force Headquarters, from 1992

to 1995, saw the value of the *intercom* as a community newspaper — a means to provide information about new technology, new directions, best practices, policy and guidance. He gave AFCA a new charter to turn *intercom* into a functional newspaper that supported the entire comm and info community.

The magazine thrived because it was a running documentary of achievements and events in the dynamic comm world. People were hungry to know what was happening across the Air Force and they knew *intercom* was where they'd find it. The comm and info emphasis gave *intercom* its identity, vision, and future.

Over the years, change was routine for *intercom* and its staff. Its content and focus were adapted to cover changes in missions and world events.

The *intercom* leaves a journalistic legacy. But, more importantly, the much admired and respected *intercom* proudly served the comm and info community for 46 years, providing information, continuity, entertainment, connection, and common values and culture.

It's hard to say goodbye to an old friend being laid to rest. But I'm proud to have worked with the *intercom* for so many years. It was an honor. Farewell.

WHAT I WILL REMEMBER

By Jim Verchio

Former *intercom* editor, 2003-2007

I still remember when Karen and I had our first (and really only) meeting with Col. David Kovach, then commander of the Air Force Communications Agency, about the magazine.

We both arrived on the job in early 2003 (within weeks of each other) and the time was ripe for change. The colonel had envisioned something slick, something fun, but he wasn't sure how to get there. So, that was our charge. As we started to collaborate on the way ahead, we noticed that the colonel would give us complete empowerment to press with our recommendations. We built templates, style sheets and color palettes. We reorganized the content and streamlined the pages. I remember we came up with funny phrases like Techno Gizmo, Geek Speak, Time Machine, and my all time favorite, Jag in a Box. We laughed, but we weren't sure if this new personality would be welcomed. Not only was it welcomed, but we enjoyed the best working environment you could imagine. Support from your leadership, creative control, empowerment to make tough editorial decisions . . . and room to make a few mistakes along the way.

Even though the magazine has won many awards for its design and journalistic excellence, I've always known our true success was measured by the amount of reader feedback and general interest in the publication. Did we help the commander get his word out? Did the Airman in the comm shop feel buy-in to the magazine? Did we educate the non-techies out there? Were we able to recognize our community's heroes and its heritage? The resounding answer to each question is — Yes!

We couldn't have done this without the content provided by so many of you. From the photographers and action officers to the MAJCOM directors and general officers, you are what made the *intercom* a success. You were the ones that educated the world on what comm brings to the fight. Karen and I were just fortunate enough to be able to put it all together, along with the bestest boss ever, Lori Manske.

When the door closes to the *intercom*'s newsroom (OK, it's only two cubicles), I'd like each of you reading this to take one thing away from this journey.

Be proud of not just the magazine, but the comm community as a whole. There were some bumps in the road during our journey; however, it's been a trip worth taking. The *intercom*'s passport may be expiring, but I know comm will continue to forge its way around the globe and well into cyberspace. Keep your head up and press hard.

The *intercom* may not be there to continue to validate and recognize your hard work in this printed format, but there are 46 amazing years of history and accomplishments recorded for the next generation. And, comm is all about technology, so maybe we can find another way to reach out to you — Magazine over Internet Protocol anyone?

NEWS BRIEFS



SECAF Michael W. Wynne and Senior Master Sgt. Rebecca Dryden.

KUDOS

SNCO RECEIVES AWARD FROM SECAF WYNNE

SECRETARY OF THE Air Force Michael W. Wynne presented four recent PME graduates with awards for their leadership. The SECAF Leadership Awards are given annually and recognize leadership in a student from the Air Force Senior NCO Academy, Squadron Officer School, Air Command and Staff College and Air War College.

One of the four was comm and info's own Senior Master Sgt. Rebecca Dryden, a graduate of the AFSNCOA. She's the senior information manager for SAF's Acquisition Directorate.

She was selected as the most outstanding graduate for Class 06-C and the most outstanding student among 2,118 senior NCOs from March 2006 to February 2007.

The other three recipients were Col. Brian Killough, AWC; Maj. Kelly Martin, ACSC; and Capt. Michele LoBianco, SOS.

—AFPN

KUDOS

CC EARNS ALBERT J. EDMONDS AWARD

THE AIR FORCE C4 Association honored Col. Robert Steele, former commander of the Air Force Communications Agency and now retired, with the Albert J. Edmonds Award in May.

The award recognizes outstanding service to the

Air Force C4 community. Individuals so honored, are selected by the AFC4A Board of Directors.

Previous recipients are: Col. Glenn G. Giddings, Col. James R. Lauducci, Maj. Gen. Charles E. Croom, and Lt. Gen. William Hobbins.



Col. Robert Steele

IMPROVEMENTS

SHAW TECHNICIANS FOCUS ON BETTER AIRFIELD COMM



Airman 1st Class Greg Biondo / 4th FW PA

Senior Airman Michael Ellis and Airman 1st Class Jayson Powers, airfield systems technicians from the 4th Communications Squadron mission systems flight, run a systems check on a localizer, which provides a centerline for aircraft as they approach the runway.

USING PRINCIPLES FROM the process-improvement initiative known as Air Force Smart Operations for the 21st Century, a team gathered May 21 - 24 to streamline maintenance processes in the 4th Communications Squadron's mission systems at Shaw AFB, S.C.

The mission systems flight performs maintenance on radars, radios and airfield systems. Their team identified several areas for improvement, including maintenance recording and reporting, supply-chain logistics and operational systems testing.

The team sought to improve data integrity, eliminate duplication of effort in data-entry documentation, and reduce the time that mission systems technicians spend inputting work orders into their maintenance database.

These improvements, when coupled with better communications between the flight and the equipment parts suppliers, will reduce the total time spent fixing mission-critical airfield systems. — Staff Sgt.

Shawn J. Jones, 4th FW/PA

2007 Air Force Information Technology Conference

Global Effects through Integrated Information

Aug. 13-17, Auburn University in Montgomery, Ala.

Online registration deadline: Aug. 11

(<http://afitc2007.gunter.af.mil/registration.aspx>)

This year's AFITC is bringing together key figures in the field of information technology and government leaders. All come with a common goal, to learn how to best apply the latest, cutting-edge technology in keeping the Air Force the most advanced fighting force in the world. All Department of Defense personnel, local and state employees, government contractors, college staff and students are welcome to attend.

TECHNOLOGY UPDATE



Teams test equipment in the convoy vehicles.



Team members complete a RIPRNET tower in Iraq.



Teams work through the night to complete a RIPRNET shelter.

“CAN YOU HEAR ME NOW?” is being asked by U.S. military convoys throughout Iraq and thanks to the Radio Over Internet Protocol Routed Network, or RIPRNET, the answer is a resounding “Yes.”

With RIPRNET, convoys are no longer restricted to a 10-mile line-of-sight limitation of their vehicle radios. Now they can use those same radios to talk with controllers hundreds of miles away.

As Iraq was embracing its first democratic election, concerns were high that terrorists might stage 9/11-style attacks. Senior leaders needed the ability to directly communicate with Combat Air Patrols and hear an intercepting pilot's first-hand observations. They needed to shorten the “decision cycle” from minutes to seconds to make the fateful “shoot/don't-shoot” call from the Combined Air and Space Operations Center located more than 1,000 miles away. To address this operational need, Air Force communicators from CENTAF designed what was to become RIPRNET, a stand-alone network dedicated to routing C2 radio traffic beyond traditional LOS limitations.

With the successful delivery of “CAOC-to-cockpit” communications, the RIPRNET concept was expanded to enhance communications between the Air Support Operations Center, Close Air Support Aircraft, and Tactical Air Control Parties. RIPRNET has extended the range of the net and controllers can now move further out into the battle area reducing time-to-target and saving fuel.

Another expansion of the RIPRNET concept enhanced the C2 capability of military convoys traveling in Iraq. The Army has dozens of radio relay points positioned along the main supply routes. These relay points require heavy manpower and orbiting aircraft to support. RIPRNET extended the convoy C2 radio nets to provide end-to-end 24x7 radio coverage along these routes. This minimized the need for orbiting aircraft and allowed closure of the relay stations.

The time saved by using RIPRNET has already been credited with saving a life. In November 2006,

a convoy traveling in a remote area of Iraq was hit with an IED that injured a soldier with a critical head wound. The convoy crew thought they were out of radio range of assistance and feared the injury would be fatal. A radio operator sent a radio “all-call” for help not realizing the new RIPRNET was operational in that area. A sheriff station, monitoring the net with a RIPRNET console, heard the call and immediately dispatched MEDEVAC resources. Medical personnel later credited the incredibly fast response as the difference between life and death for the injured soldier.

To date, RIPRNET boasts 14 core sites and 37 ground station consoles. It has cost less than \$10 million to implement, and is expected to cost \$300,000 a year to maintain. These costs are small compared to the cost to keep radio relay aircraft in orbit to support convoy C2.

RIPRNET has gone from an idea to an operational, war-tested capability thanks to the dedicated and often heroic efforts of CENTAF's communicators. With no official program office or funding line, the system was fielded “on-the-fly” in a combat zone. Despite the challenges of typical interservice and interagency rivalries and processes, the teams overcame the institutional momentum and resistance-to-change often found in the military's organizational hierarchy. RIPRNET was fielded and operated simultaneously.

Col. Mike Lewis, who was the CENTAF/C6 from May '06-April '07, said, “RIPRNET has been a whirlwind effort that has saved lives and will transform the way our military looks at C2. Our CENTAF communicators are heroes who jumped out of their comfort zones to combine their radio expertise with network knowledge and vice-versa. These impressive warriors took this concept, traveled in convoys, hung from towers, braved snipers, mortars, and rockets, and fielded an entire infrastructure in just under two years.”

“Can you hear me now?”

If you are using the RIPRNET, of course you can. — Lt. Col. Randall Sparks, AFFOR/A66E



What is it?

The Special Operations Forces High-speed Agile Reachback Kit, known as SHARK, is an “everything over IP” system small enough to be carried onto a commercial airliner, yet robust enough to provide unclassified, secret and top-secret voice/video/data using any available IP-based network.

The SHARK is intended to be a “first boots on the ground” communications system for small teams. It’s compatible with other EoIP systems in testing and early employment phases. It can be used to provide a redundant path or back up connectivity once larger follow-on systems arrive.

Why do we need it?

Quite simply current tactical communication systems are either too large, too throughput restricted, and don’t provide the networking flexibility or power protection needed by SOF in a single system. The SHARK will enable small forward deployed teams the ability to send and receive classified and unclassified information faster than what is currently available, while also enabling simultaneous voice, video and data over a single transport system.

The SHARK will provide at least eight times the throughput (up to 492Kb/s) of the current INMARSAT M4 (64Kb/s) systems. The SHARK was designed to connect to any IP-based SATCOM terminal as well as any available commercial internet provider (e.g. hotel internet) and has integrated surge/brownout protection. This makes the SHARK completely adaptable to its environment. The SHARK’s revolutionary reachback and power protection agility add an additional dimension to AFSOC’s continual pursuit of lighter, leaner and more capable systems.

How does it work?

SHARK was designed to provide multiple security level voice, video and data regardless of IP input method — commercial internet, commercial or military SATCOM. The SHARK contains an embedded Thrane and Thrane e700 BGAN terminal that it uses as its primary SATCOM medium. It also has an embedded classified router, HAIPE 1.3.5 compliant encryption devices and a removable unclassified router enabling it to provide both NIPRNET and SIPRNET services through a FIPS 140 compliant VPN tunnel while at the same time meeting red/black separation requirements. The SHARK receives additional capability through its projected ancillary JWICS enclave, wireless SECNET 11/54 enclave and VoIP secure phone enclave.

What’s ahead?

The contract for the SHARK was awarded June 6, and prototype testing is set for July 6, with the initial units going to the field Aug. 1.

It will then go through prototyping before entering into the Defense Information Systems Agency Joint Interoperability Testing and Certification process. SHARK training is expected to take place this fall.

The goal is to have all AFSOC tactical communications units and Aviation Foreign Internal Defense units trained with systems fielded by early 2008.

The gateway that will enable all of the SHARK’s many capabilities is under construction and will be ready to support AFSOC’s SHARK requirements soon.

Source: HQ AFSOC/A6

ENDURE
THE BATTLE

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YOUR FEARS

AND
OVERCOME



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Journal of the Air Force C4ISR community ★ July 2007

"AFSOC's transformation is a credit to innovative Airmen,

the greatest part of our Air Force heritage . . .

Keeping our cutting edge depends on people

with good ideas and initiative

to push us toward even brighter horizons."

Lt. Gen. Michael W. Wooley
Commander, Air Force Special Operations Command

SPECIAL OPS COMM



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★ TACTICAL COMM ★ EXERCISE FOAL EAGLE ★

TOTAL FORCE TEAM ★ FIGHTING TERRORISM